

Actual & Perceived Information Literacy Skills in Pre-Service Educators

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Overview

Today's college graduates *must* be information literate; in fact, most accrediting agencies for higher education—among them the Western Association of Schools and Colleges (WASC) – emphasize the criticality of this competence, regardless of the degree students earn.

But what does it mean to be information literate? Researchers offer many definitions—some abstract, some concrete. Following is the characterization provided by the Association for College & Research Libraries (ACRL):

Information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information (2000).

ACRL offers a detailed list of student competencies for librarians and other educators to use in planning instruction. They are organized into five “standards”; each includes several performance indicators and outcomes.

The researchers explored whether a pre-service educator's *perception* of his or her ability to identify potential information sources relates to his or her *actual ability* to identify information sources. Specifically, this study focused on ACRL's **Standard 2: The information literate student accesses needed information effectively and efficiently**. The specific performance indicators for this standard are below while the indicators to which this study attended are shown in italics.

1. The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.
2. *The information literate student constructs and implements effectively-designed search strategies.*
3. *The information literate student retrieves information online or in person using a variety of methods.*
4. *The information literate student refines the search strategy if necessary.*
5. The information literate student extracts, records, and manages the information and its sources
information literate student reevaluates the nature and extent of the information need.

In practice, many librarians aim interventions toward students who express lower levels of confidence in their information literacy skills. The results of this study addressed whether or not this is a worthwhile strategy. An alternative might be to more broadly target students—including those who appear confident in their information literacy and library skills.

Literature Review

The researchers drew heavily from the Library & Information Science (LIS) and Education disciplines in preparing this review. It provides an overview of how information literacy is taught within higher education, instruments that have been used to assess skills and perception, and information literacy within teacher education.

Information Literacy within Higher Education

Universities are turning their attention to assessing student information literacy skills on their campuses largely due to accrediting agencies requirements (Hernon & Dugan, 2004). The methods used to deliver instruction and assessment may be institutionally driven or instructor driven. In most cases, librarians – as recognized experts on information finding and use – provide information literacy instruction.

Libraries' role in information literacy

The way information literacy instruction is delivered on academic campuses is as varied as the campuses themselves. Here are some examples of librarian-led information literacy instruction:

- **One-Shot.** “One-shot” instruction is provided to a class as requested by a faculty member. These sessions can be general overviews of how to use the library or focused on a specific paper or project students need to complete for their course.
- **“Just in Time.”** Librarians sometimes provide several workshops to students as requested by a faculty member. The workshops are dispersed throughout the course and cover topics that students need *when they need* them.
- **“First-year experience.”** This one-unit course is usually a semester long and targets new and transfer students. The goal is to provide students with essential skills that will help them succeed in college, such as note taking, research, and critical thinking.
- **Reference & consultations.** These are the services with which most library users are familiar. Through the reference desk or a consultation, librarians provide individual instruction with users.

- **Online instruction.** Online instruction is a new, growing area for many libraries. It takes many forms, from a small, one-minute video about how to search a database (Turnbow, 2009b) to a full-length online workshop, including assessment (Turnbow, 2009a).

Whether or not Information Literacy instruction is required in the curriculum varies across college and university campuses. Regardless, formalized “testing” or assessment of these skills is typically not required by the campuses. Without support at a campus-wide level, librarians will continue to struggle to provide an accurate picture of student information literacy skills. Despite this, many librarians have developed and administered instruments in order to illustrate student information literacy skills – or lack thereof – to their campus administrations. These will be discussed below.

Instruments to Assess Information Literacy Skills and Perception

Instruments to assess information literacy skills

Many instruments have been developed to measure information literacy competencies (i.e. *actual skills*) based on the ACRL standards. Neely (2006) discusses the use of many of these instruments in detail. In contrast, only a handful of studies have examined the correlation between "actual" performance on information literacy tasks with students' perceived performance (Cameron, Wise, & Lottridge, 2007; Geffert & Christensen, 1998; Ivanitskaya, Laus, & Marie Casey, 2004; Maughan, 2001; Ren, 2000). Unfortunately, most of these instruments have not been validated. As far as the researchers are aware, none of these studies included correlation analysis of participant results with perceived level of skill.

Assessing perceptions using Competency Theory

The lean research base focused on the correlation between student perceptions of their information literacy skills and actual performance on tasks tends to be grounded in competency theory; Kruger and Dunning (1999) are largely credited with developing this train of thought. They suggest that people who perform at a low skill level lack the metacognitive abilities to recognize their own incompetence. Therefore, they cannot accurately assess their own or others' skills and tend to overestimate their abilities. Further, people that perform at a very high skill level tend to underestimate their performance.

Kruger and Dunning detail four studies that they designed to test their predictions in regard to competency theory. Three of those studies directly relate to the relationships explored in the current study of perceived versus actual information literacy.

1. In the first, 65 undergraduate students were asked to rate how funny given jokes were, as well as rate their own ability to recognize what's funny. The researchers found that participants were moderately able to rate their own identification of humor, but overestimated their ability relative to their peers (p. 1123).
2. The second study explored the logical reasoning skills of 45 undergraduate students. The students completed 20 questions from the Law School Admissions Test, and then made three estimates about their abilities and test performance. Participants overestimated their logical reasoning abilities relative to their peers (pp. 1124-1125).
3. Study 3a asked 84 undergraduates to estimate their knowledge of American standard written grammar, to estimate their knowledge relative to their peers, and then to complete a 20-item grammar test. "As in studies 1 and 2, participants overestimated their ability and performance relative to objective criteria" (p. 1125).

Kruger and Dunning conclude, "Indeed, across the four studies, participants in the bottom quartile not only overestimated themselves, but thought they were above average" (p. 1130). They go on to say, "Across the four sets of studies, participants in the top quartile tended to underestimate their ability and test performance relative to their peers" (p. 1131).

In 2007, Gross and Latham used competency theory to explain the significant correlation they discovered between incoming freshmen students' actual performance on information literacy (IL) tasks compared to their perceptions. Participants were 51 incoming freshman who were either in the top 25% or bottom 25% of their high school graduating classes based in GPA and SAT scores. In addition to testing the participants' information literacy skills, Gross and Latham also asked them to estimate their performance both before and after taking the test and their performance relative to other participants. They analyzed IL scores and performance estimates by percentage, by estimated number of correct answers, and by expectations of performance compared to others. "In all cases these variables were positively correlated, but not to a significant degree" (343). These findings mirror those of Kruger and Dunning as they relate to information literacy.

Study Instrument Design

Questions to test actual skills

The researchers discovered four validated instruments to test information literacy skills based on the ACRL competencies.

1. Information Literacy Test (ILT) developed at James Madison University (Cameron et al., 2007)
2. Research Readiness Self-Assessment (RRSA) from Central Michigan University (Ivanitskaya et al., 2004)
3. Project SAILS from Kent State University (Kent State University, 2000-2009)
4. ETS iSkills – Information and Communication Technology Literacy Test (ETS, 2009)

Due to high costs and access issues, the researchers were not able to use any of these instruments to test *actual* information literacy skills in this study. They instead developed an instrument largely based on validated information literacy test items from Morner (1993) and from other instruments that were compiled by Neely (2006).

Questions to test perceptions of knowledge

The questions that were used to test *perceived* skills were largely based on studies conducted by Kruger and Dunning (1999), Ehrlinger and Dunning (2003), and Gross and Latham (2007).

Gross and Latham (2007) used a simple method to test student perception of information literacy skills. After completing the questions that tested *actual* information literacy skills, 58 incoming freshman at a large state university were asked to:

1. Give a percentile estimate of their performance.
2. Estimate how many questions they thought they got right.
3. Give a **percentile estimate** of their performance relative to other students in the study.

For this study, the researchers used a similar method to this one.

Information Literacy within Teacher Education

Information literacy is a core component of teacher preparation—not surprising given the growing number of content-based professional organizations (e.g., the National Council of Teachers of English, the National Council of the Social Studies and the National Council of Teachers of Mathematics) that advocate for information literacy integration within all aspects of the K-12 enterprise. The need for pre-service educators to demonstrate information literacy has been formalized by the nation’s primary accrediting body, the National Council for Accreditation of Teacher Education (NCATE).

Cited in a 2008 study by Birch, Greenfield, Janke, Schaeffer, and Woods were the results of an informal survey of College of Education faculty at the University of Arizona. Ten faculty members who teach pre-

service educators were asked the question: “What information literacy skills do your students need to prepare them to teach?” The following skills were identified (p. 370):

- Finding resources
- Organizing information
- Establishing priorities
- Maintaining research skills
- Keeping current
- Evaluating information quality

Results from this very small informal survey cannot be generalized, but do point to a general awareness of information literacy among education faculty.

Information literacy standards and accreditation

In the 1990s, several education-related professional organizations revised program standards for teacher education in order to include information literacy competencies; among them were the National Council for the Social Studies, the National Council of Teachers of English, and the International Reading Association (Henderson & Scheffler, 2003). During the same time period, many university accrediting bodies incorporated information literacy into accreditation standards. Agencies recognizing information literacy included the Southern Association of Colleges and Schools, the New England Association of Colleges and Schools, the North Central Accrediting Agency, and the Middle States Association (Henderson & Scheffler, 2003).

The publication of the 2000 NCATE standards was a watershed for information literacy education, with competence in information and technology literacy highly promoted/emphasized. In particular, Standard 1 (Candidate Knowledge, Skills, and Dispositions) features the following behaviors that pre-service educators must display (Birch et al., 2008, p.370):

- Demonstrated ability to use tools and processes of inquiry
- Critical analysis
- Reflective practice
- Data collection
- Integration of technology and information literacy in instruction to support student learning

These behaviors closely mirror the ACRL standards described above. Existing information literacy instruction, if closely tied to those ACRL standards, may be sufficient to meet the needs of candidates in teacher education programs.

Information literacy instruction within teacher education coursework

Details of specific information literacy instruction within teacher preparation programs are scarce in the professional literature. Henderson and Scheffler (2003) describe a few such programs within teacher education curricula, most of which were conducted under the leadership of academic libraries.

A few years later, Birch and her colleagues (2008) identified several partnerships between teacher education departments and college or university libraries designed to meet NCATE information literacy and technology standards: “Partnerships between teacher education faculty and education librarians improve the likelihood that both NCATE and ACRL competencies will be integrated with and reinforced by content instruction and performance” (p. 370). Examples include the following:

1. The Information Literacy Project, University of British Columbia. This ongoing program allows pre-service educators to observe both the planning and implementation of an information literacy class before planning one independently (Asselin & Lee, 2002).
2. Westfield State College. An education librarian and two professors of education collaborated with 200 students to create the Pre-Service Information Literacy Model (Birch et al., 2008).
3. Wayne State University. Librarians are paired with education faculty to team teach a research methods course for early child education graduate students (Bhavnagri & Bielat, 2005).

Recommendations for change

Even the collaborative models described above appear librarian-led, and many are published as case studies within library science literature. Teacher education programs must ultimately become responsible for integrating information literacy competencies into the curricula. These programs must design robust assessment strategies to ensure mastery of information literacy skills, and offer ongoing professional development opportunities related to information literacy to both pre-service educators and faculty alike.

Methodology

The study used a closed-question survey to explore the possible correlation between actual and perceived information literacy skills in pre-service educators. The survey was designed to measure both

variables as well as collect demographic and other basic data that could be used to perform secondary analyses if warranted. To recap, items measuring actual information literacy skills were derived from the ACRL Information Literacy Competency Standards for Higher Education, with each mapped to a specific performance indicator within Standard Two.

Participants

The sample for this correlation study was a convenience sample composed of students in a single, online section of EDTEC 470: Technologies for Teaching, at San Diego State University. All are enrolled in the 5th year credential program, seeking a variety of credentials. They complete EDTEC 470 to meet state credentialing requirements associated with technology use and instructional integration. Sixteen (n=16) respondents completed the survey and were included in the analysis.

Instrument Development

The instrument was developed and administered using SurveyMonkey, a subscription-based survey-generation service for the web. The survey contained a total of 20 numbered items, although some were multi-part and/or required multiple responses. The entire survey instrument is available for review in Appendix C.

One cluster of items was organized around demography and background. For example, respondents were asked to indicate their educational background, undergraduate major, year bachelor's degree was earned (selected from a range), and the highest degree obtained. Three multi-part items called for respondents to categorize the frequency of their interactions with various library services such as in-person reference, email reference, and online tutorials. These items supported a secondary analysis of correlation between depth and frequency of prior library interaction with actual information literacy skills. The final background item required respondents to rate their comfort with various research tasks such as identifying a relevant library database, using Boolean operators, or creating a reference list. The results from this item were also useful for a secondary analysis of correlation between comfort with research and either perceived or actual skills.

Eleven numbered items (some with multiple parts) measured each participant's performance on one or more ACRL performance indicators. Respondents could score a total of 29 points on this section. The researchers divided the scores into three categories: Not Proficient (NP), Proficient (P) and Advanced Proficiency (AP). Scores that reflected 0-65% correct (0-18) were NP, those that fell within 66-90%

correct (19-25 points) were P, and those from 91-100% correct (26-29 points) were AP. This methodology was used in a similar study by Gross and Latham (2007, p. 338).

Similar to the Gross and Latham study mentioned above, the final two items on the survey measured each respondent's perception of how s/he performed on the skills questions. The first asked the respondent to estimate how many questions were answered correctly, and the second item asked the respondent to estimate percentile compared to other classmates completing the survey.

Administration

The EDTEC 470 course instructor sent an email to all enrolled students (n=41) inviting them to complete the survey. Included in the email message were a brief overview of the study, information about the course for which this study was designed, dates during which the survey would be active, and an email link to the instrument in SurveyMonkey. The instructor also informed the email recipients that any student who completed the survey could be entered into a drawing for a \$10 Starbucks gift card. Students were given two weeks in which to submit their responses. Only five people had completed the survey by the conclusion of week one, so a reminder email was sent by the section instructor. By this point, the number of enrolled students had by this time dropped to 38.

Contextual Factors

This section discusses the limitations the researchers encountered with the sample and instrumentation for this study.

Study Sample

The researchers used a convenience sample of students enrolled in a single section of EDTEC 470, Technologies for Teaching at San Diego State University. At the time that the survey was distributed, enrollment in the section stood at 41 students, although several students withdrew from the class before the data collection period ended. Additionally, there was a low response rate (n=16) to the survey. While the researchers did not perform a sample size calculation for this analysis, they estimate that the study was underpowered. Fraenkel and Wallen suggest that "the minimum acceptable sample size for a correlational study is considered by most researchers to be no less than 30" (2009, p. 335). Because of the small sample size in this study, correlations may not accurately describe relationships between variables.

Instrument

Few instruments have been developed to study the correlation between actual and perceived information literacy skills; thus, the researchers had to develop this instrument largely from scratch. Preliminary analysis of the data suggests that a correlation might have been more accurately measured if the scales for the two variables were the same. Actual information literacy was scored between 0 and 29, representing the actual number of items answered correctly by a participant on the skills portion of the survey. Perceived information literacy was scored between 1 and 4, representing the participant's selection of a statement that most described how s/he thought he did on the skills portion. While a correlation coefficient may be generated for any paired scores regardless of scale, the researchers theorize that the coefficient for this study may have been different if participants were asked to guess their actual score on the skills portion using the same (0-29) scale. Similarly, participants were asked to select a quartile when estimating how their scores compared to those of classmates completing the survey. The correlation between perceived and actual percentile might have been more accurate if participants were asked to guess their actual percentile.

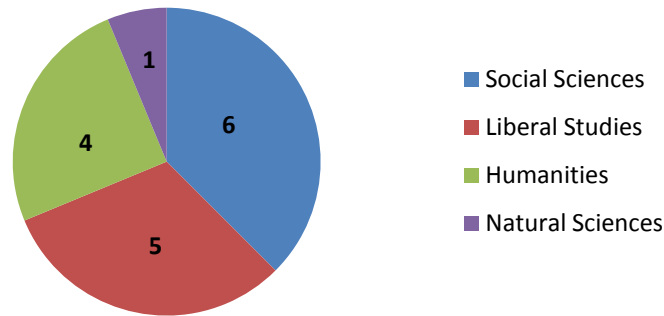
Findings

This section details participant demographics as they relate to this study as well as results of correlation analyses that compared participant test scores with perceptions of test performance.

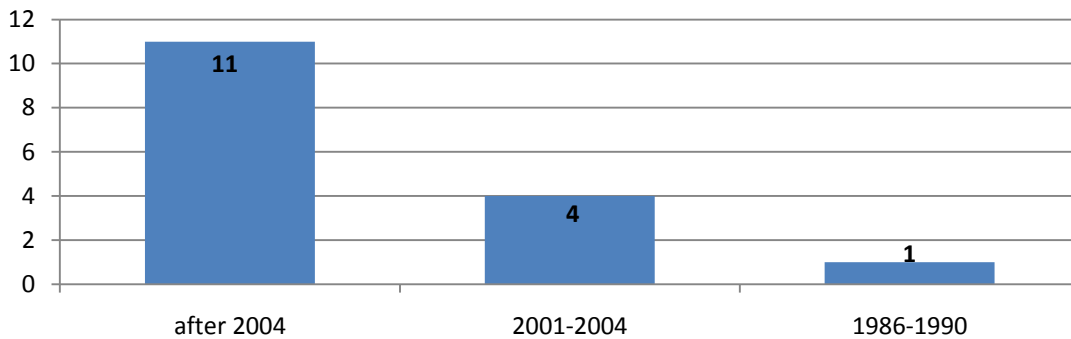
Participant Demographics

Sixteen students enrolled in the section completed the survey by the end of the two-week period. The charts below illustrate the distribution of the undergraduate degrees earned by the participants by broad subject area and year. Respondents were fairly well distributed between social sciences (n=6, or 38%), liberal studies (n=5, or 31%), and the humanities (n=4, or 25%). Eleven (69%) were recent graduates, receiving their undergraduate degrees in 2004 or later. Only two respondents (13%) completed any education beyond a bachelor's degree (both indicated that they held a master's or professional degree).

Participants: Undergraduate Degree by Subject Area



Participants: Year Bachelor's Degree Obtained



Actual Information Literacy Skills – Whole Number Scores

Scores on the skills questions (items 8 through 18) were totaled for each survey respondent, with 29 points possible. Scores ranged from a low of 14 points to a high of 24 points. The median score was 19, falling just into the range of points considered Proficient. The mode, or most commonly occurring score, was 17—which for this study was considered Not Proficient.

Results suggest that *pre-service educators* at the post-baccalaureate level are not necessarily information literate. *No one scored in the range for Advanced Proficiency* although nine participants (56%) scored between 66% and 90%, placing them in the Proficient category. Seven respondents (44%); a fairly high number, scored 65% or lower, making them Not Proficient.

Skills Perception – Estimates of Performance

The final two questions on the survey (items 19 and 20) elicited the respondents' perceptions of how well they performed on the skills portion of the survey. Item 19 asked the respondent to estimate the

percentage of skills-based questions s/he answered correctly. This closed question offered four answer choices, scored as follows:

I think I answered 0-25% correctly (0-2 questions) = 1 point

26-50% correctly (3-5 questions) = 2 points

51-75% correctly (6-8 questions) = 3 points

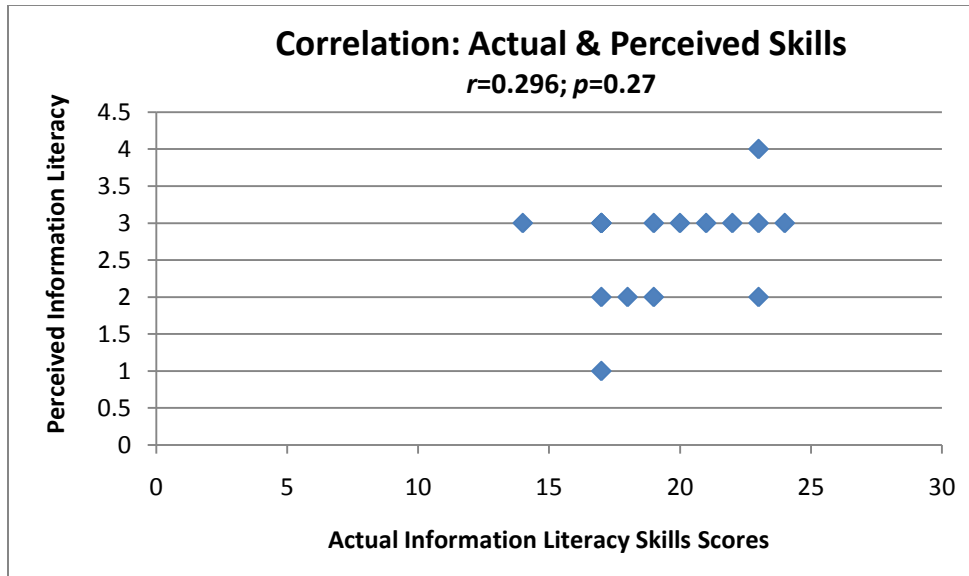
76-100% correctly (9-11 questions) = 4 points

Only one respondent (n=1; 6%) selected 0-25%, scoring 1 point; one respondent (6%) selected 76-100%, scoring 4 points. The rest of the participants (n=14; 88%) selected one of the two middle choices. The answer selected most frequently was the third choice, with 10 respondents (63%) estimating that they answered 51% to 75% of the skills questions correctly. Four respondents (25%) selected 26-50%. That 88% of respondents placed themselves in one of the middle two quartiles might indicate that the students in this sample neither underestimate nor overestimate their information literacy skills.

Correlation of Actual and Perceived Skills

Each actual skills score (14 points through 24 points) was paired with the corresponding perception score (1 through 4). The paired scores were entered into Excel so that a correlation coefficient (Pearson's r) could be generated.

Rounding to three decimal places, the correlation coefficient was 0.296. Fraenkel and Wallen state that correlation coefficients below 0.35 show only a slight relationship between variables (p. 337). The two-tailed p -value for this correlation is 0.27. Although the correlation is slightly positive, this p -value indicates a non-significant relationship between actual and perceived information literacy skills in this sample.

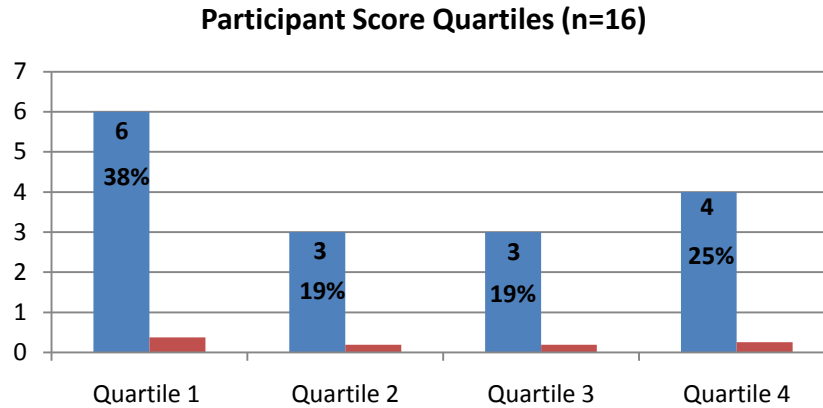


Kruger and Dunning's competency theory, described in the literature review, hypothesizes that competent individuals tend to underrate their abilities, while less competent people tend to overrate their abilities when performing specific tasks. Competency theory thus suggests that any correlation of perceived and actual skills would likely be negative. This analysis did not confirm that competency theory was at work when pre-service educators were asked about their perceptions of their information literacy skills.

Actual Information Literacy Skills – Score Quartile

To explore performance more systematically, scores were assigned to quartiles. Because the final score was a whole number and there were multiple values at several of the data points, the scores did not fall into four evenly divided groups. The Excel Quartile function was used to determine cutoff points for each quartile.

There were six respondents (38%) who fell into the first quartile: one score at 14 points and the five respondents who scored 17. Three respondents (19%) scored 18 or 19 points and landed in the second quartile. There was one score each at 20, 21, and 22 points, meaning 19% fell into the third quartile. Three respondents received 23 total points and one scored 24, placing these four respondents (25%) into the fourth and final quartile.



Skills Perception – Estimates Relative to Other Respondents

Respondents were also asked how well they thought they performed on the skills questions in comparison to their classmates who also completed the survey. This question (item 20) was very similar in construction and scoring to item 19:

I think I did as well as 0-25% of the students = 1 point

26-50% of the students = 2 points

51-75% of the students = 3 points

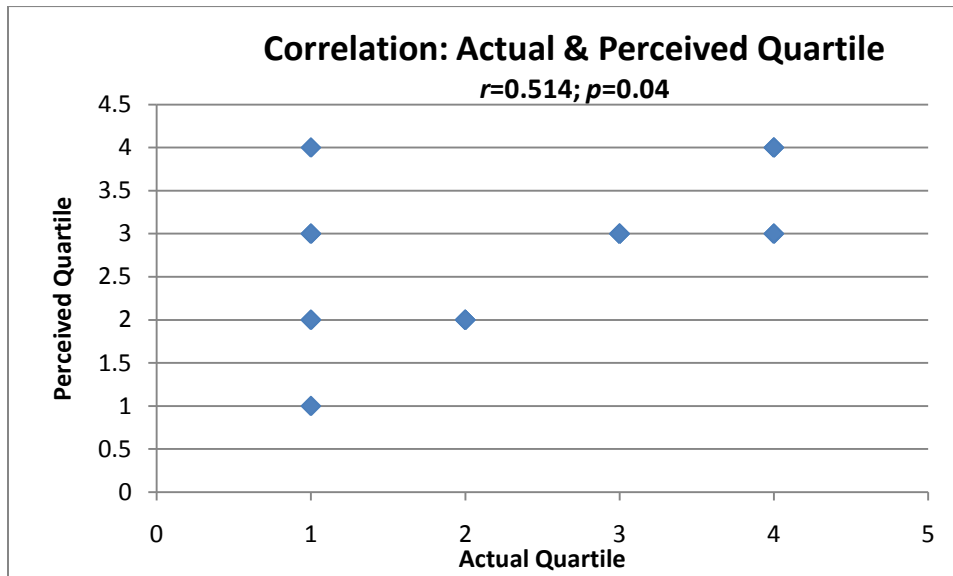
76-100% of the students = 4 points

Three respondents (19%) rated themselves in the highest quartile, scoring 4 points. Seven respondents (44%) felt that they performed as well as 51-75% of the students, scoring 3 points. The choice for the second quartile – 26-50% of the students – was selected by 5 respondents, or 31%. Only one person (6%) estimated that they fell into the lowest quartile. The majority of participants again estimated their relative performance in the middle two quartiles, possibly indicating a reluctance to overestimate or underestimate performance.

Correlation of Actual and Perceived Quartiles

The researchers next paired the actual quartile into which each respondent's score fell with that respondent's perceived quartile. The correlation coefficient for these sets of variables was 0.514. This can be considered a moderately positive correlation. Fraenkel and Wallen state that while correlations of at least 0.50 allow "crude predictions...such predictions will be subject to sizable errors" (p. 337). The *p*-value for this correlation coefficient was 0.04, indicating a significant probability of a positive

relationship between these variables. It appears that participants were able to positively predict into which quartiles their scores would fall.



The fact that this correlation was stronger than the prior one suggests that students were better at judging their skills and abilities in relation to others than they were at judging *their own skills* independent of any comparison standard.

Comfort with Research-Related Skills

One multi-part question on the survey (Item 7) called for respondents to rate their comfort with 10 specific research-related activities. Each activity corresponded to at least one question on the skills portion of the instrument. Responses were scored according to degree of comfort:

Not at all [comfortable] = 1 point

Somewhat = 2 points

Moderately = 3 points

Very = 4 points

Extremely = 5 points

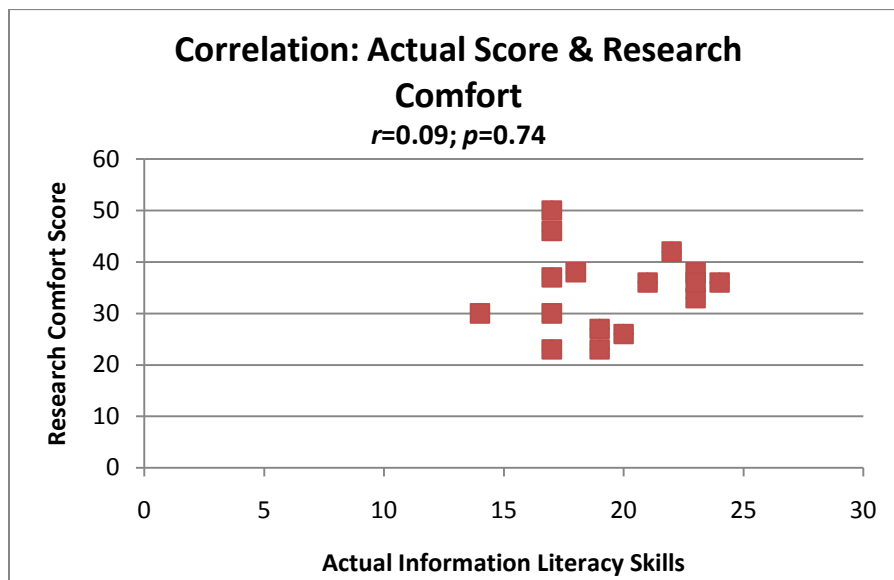
With 10 activities scored at a maximum of five points each, respondents could score a composite 50 points on this research comfort scale. Scores ranged from a low of 23 to a high of 50, with the median score at 36. The mode was also 36.

Respondents indicated the greatest degree of comfort with basic library-related tasks, such as finding out whether the library had a specific book. Eight people (50%) indicated that they were “extremely comfortable” with this task. The research activity that was least comfortable for this sample asked about the respondent’s ability to use wildcards in a database search. Nine people (56%) were “not at all comfortable” with this task, and only one person was “extremely comfortable.”

Appendix A includes a chart that illustrates how participants’ rated their comfort with various activities.

Correlation of Actual Skills and Research Comfort

The researchers paired the actual skills scores (14 points through 24 points) with the corresponding research comfort scores, which ranged from 23 to 50. This correlation was the weakest in this study (Pearson’s $r = 0.090$). The two-tailed p -value for this r value is 0.74.



The lack of correlation between a respondent’s information literacy skills and his or her comfort with various research tasks has many implications for information literacy instruction. Many campuses make information literacy instruction available through optional tutorials or workshops on specific research tasks. When instruction is optional, students might select only those tutorials or workshops for research tasks with which they feel uncomfortable. This analysis hints that a student’s comfort level with a task may not indicate a level of proficiency or competence with that same task. Mandatory instruction is one solution to the lack of correlation.

Library Use

Library use was measured in a single question (Item 4) asking respondents to rate the frequency of usage of three types of libraries: public, university, or specialized. For each of the three library types, scoring was as follows:

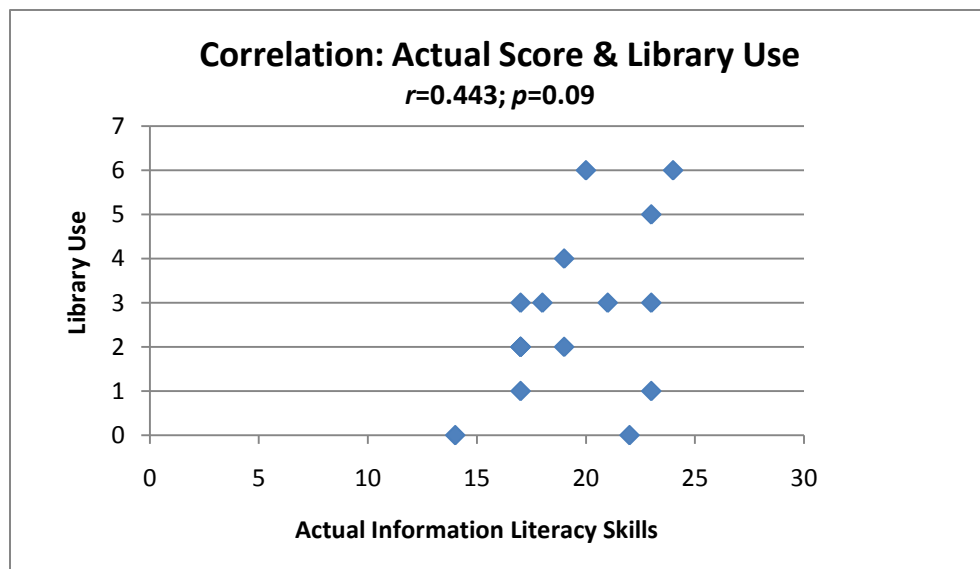
- At least one time per week = 3 points
- At least one or two times per month = 2 points
- At least one or two times per semester = 1 point
- Can't recall = 0 points
- Never = 0 points

Appendix B includes a chart that illustrates how often participants used these types of libraries.

Points for each library type were totaled to give a composite library use score. Scores for the 16 respondents ranged from 0 to 6, with a median of 2.5 points.

Correlation of Actual Skills and Library Use

For this final correlation analysis, the researchers paired each actual skills score with the respondent's library use score. As described above, this score ranged from 0 to 6 in the sample. Pearson's r for this correlation was 0.443, indicating a moderately positive correlation. For two-tailed probability, $p=0.09$.



The researchers hypothesized that the frequency of library visits would have a positive impact on information literacy skills. This correlation coefficient r indicates there is some positive relationship

between library usage and information literacy, although the p value implies that the significance of this relationship may be no stronger than random.

Discussion

Overall, the results of this study do not support the results found in other correlation studies completed by Kruger and Dunning (1999) and Gross and Latham (2007). As mentioned previously, this may be in large part due to a low response rate and the instrument design. A study that includes a larger sample (preferably over 30) may yield more accurate correlations. In addition, an instrument that asks participants to rate their performance based on percentages instead of quartiles would allow the data to be correlated more accurately.

The researchers were surprised by the number of participants ($n=8$) who correctly perceived the percentage of questions they answered correctly, and the number of participants ($n=7$) who accurately estimated the quartile into which they fell. Prior research related to competency theory suggests that this number would be lower compared to the total included in the study sample. The researchers hypothesize that participants' perceptions might be different if the "metatopic"—in this case, information literacy—was one in which students had more working knowledge. For example, the Kruger and Dunning (1999) study asked participants to rate their abilities to identify humor and grammar. Many people perceive themselves as funny and having command of the English language. This study shows that the participants feel "somewhat" or "moderately" comfortable to perform information literacy tasks (Appendix A). It is possible that there would be a greater difference in the actual versus perceived performance if participants were tested on a more common topic or one in which knowledge is considered desirable.

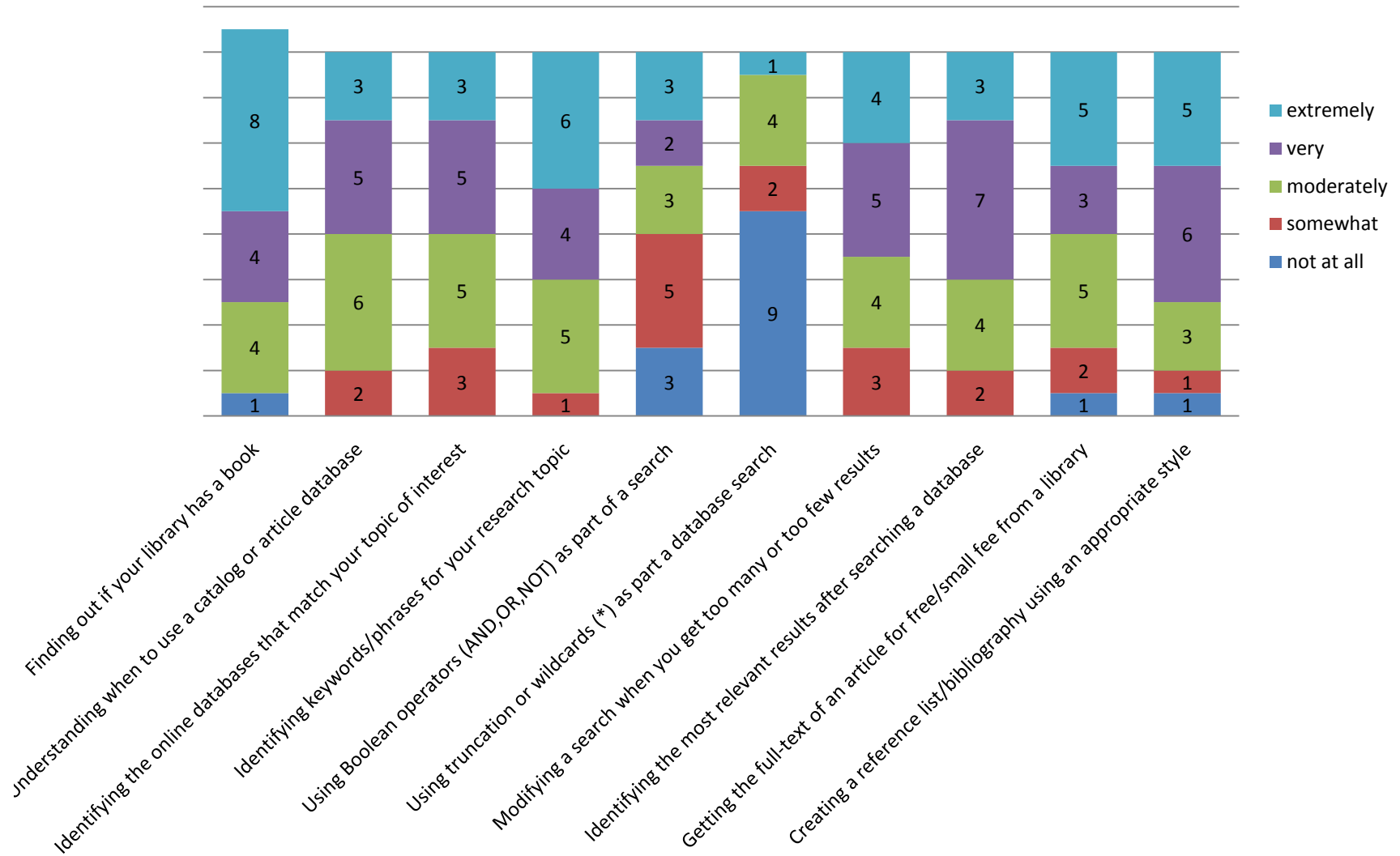
The research comfort score was derived from responses to the research tasks listed in Item 7. Each of these tasks maps to at least one skills question in the survey. Further analysis of the correlation between the tasks in Item 7 and the corresponding skills questions might also prove interesting. For example, can a participant who feels "extremely comfortable" finding a book in a library catalog actually do so? This research question was not within the scope for this study, but may yield interesting results.

Conclusion

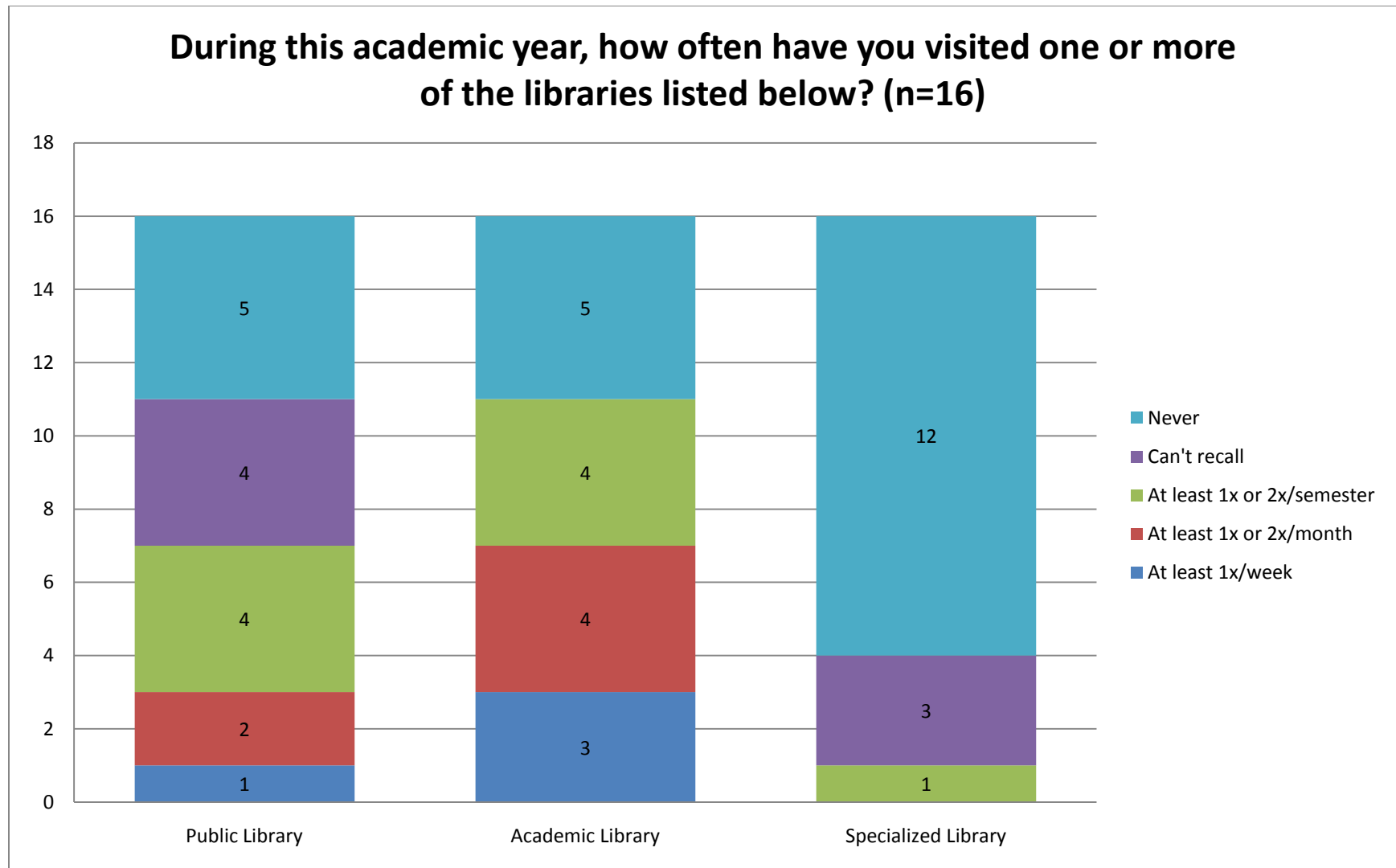
Higher education is increasingly interested in understanding students' ability to attain information literacy skills. Major associations in librarianship and teacher education already recognize the need for students to learn these skills. For the past decade, librarians have been at the center of teaching and assessing such skills. Librarians and faculty must partner to provide information literacy instruction that is integrated into the curriculum. Identifying students' actual information literacy skills and perceived ability to complete such tasks will provide a place for librarians and faculty to address specific information literacy skills in their own institutions.

Appendix A: Results for Question 7

How comfortable are you doing the following things when you do research? (n=16)



Appendix B: Results for Question 4



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